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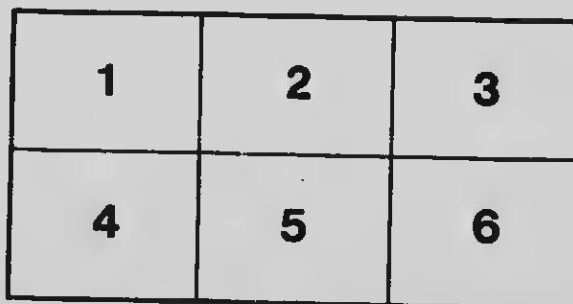
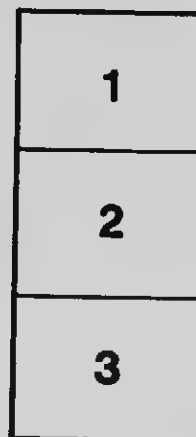
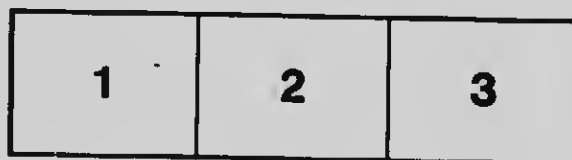
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# CONGRÈS GÉOLOGIQUE INTERNATIONAL

XII<sup>E</sup> SESSION, CANADA, 1913.

## FOURTH CIRCULAR.

To members only.

Victoria Memorial Museum,  
Ottawa, Canada,  
June 9th, 1913.

### Special Days at Ottawa and Montreal.

Your attention is drawn to the notices regarding the special days to be spent in Ottawa and in Montreal on August 1st and August 2nd respectively, mentioned on pages 35 and 36 of the Second Circular and pages 5 and 11 of the Third Circular.

### Excursions between August 3rd and August 7th.

Members are specially reminded that excursions A-4 to A-12 inclusive are all taking place between August 3rd and 7th as detailed on pages 16 to 20 of the Second Circular. The Secretary will be glad to hear if you wish to take part in these excursions or in the days spent in Ottawa and Montreal.

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**Headquarters at Montreal, Ottawa, and Toronto  
before the Session.**

**Montreal.**

At Montreal the headquarters will be at the Students' Union, McGill University, 328 Sherbrooke Street West. Headquarters will be established about July 10th, three days before the first excursion starts and will be maintained there until the opening of the Session in Toronto on August 7th. Members on their arrival in Montreal are asked to immediately register at the office in the Union and they will find writing, smoking and reception rooms at their disposal.

**Ottawa.**

For the day in Ottawa it is not felt that any special headquarters are necessary, but the Secretary's office in the Victoria Memorial Museum will be open continuously so that any special information that is required may be obtained there.

**Toronto.**

At Toronto, before Excursion A-3 starts on July 23rd, and previous to the opening of the Session, headquarters will be established in the office of Dr. W. G. Miller, Provincial Geologist, Ontario Bureau of Mines, West End, Parliament Buildings. Headquarters will be established at the University of Toronto on August 4th by the Secretary.

**Banking Arrangements.**

The Royal Bank of Canada is the bank of the Congress and it will be convenient if letters of credit, drafts, etc., are made payable through this bank in Toronto or in such other cities in Canada as the member of the Congress may desire.

A branch of the bank will be established at the headquarters of the Congress during the Session.

### Correspondence.

Please note that all correspondence should be addressed as follows:—

<b>M.</b> (NAME OF MEMBER)	NO. OF MEMBER.
CONGRÈS GÉOLOGIQUE INTERNATIONAL,	
TORONTO.	
CANADA.	

Enclosed herewith is a supply of envelopes, the use of which by your correspondents will assist in the quick delivery of your mail at Toronto.

While on Excursions mail will be forwarded from Toronto to various points to the Secretary of each excursion.

If members wish to have correspondence addressed to them at Montreal, they should use the following address,—

<b>M.</b> (NAME OF MEMBER)	NO. OF MEMBER.....
CONGRÈS GÉOLOGIQUE INTERNATIONAL,	
MCGILL STUDENTS' UNION,	
325 BHERBROOKE STREET WEST,	
MONTREAL.	
CANADA.	

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### **Guide Books.**

Sets of Guide Books can be procured in Montreal, Toronto and Ottawa before the various excursions start. An office of the Congress will be established at each place.

### **Coal Resources Monograph.**

This monograph will be published in three volumes and an atlas and it is expected will be ready before Congress meets. Members of the Congress have the privilege of buying one set for the sum of twenty dollars net, provided their orders reach the publishers or the Secretary of the Congress, on or before the 15th day of August, 1913. The price to non-members and members after the date mentioned is twenty-five dollars per set.

### **Arrival in Canada.**

You are particularly requested to inform the Secretary as to your expected date of arrival in Canada and it will be appreciated if you will kindly give this information on the form enclosed herewith.

### **Specimens.**

Every opportunity for collecting mineral, rock, and fossil specimens will be offered members, and boxes and packing materials will be placed in the baggage cars of the special excursion trains.



### Programme for the Session at Toronto.

The following programme is provisional and subject to change. The Secretary will be glad to receive suggestions. If requested by the Presidents or Secretaries, special time will be allotted for meetings during the Session of any of the International Committees.

The following sections have been suggested:—

Section 1—(a) Pre-Cambrian.

(b) Economic.

(c) Petrology, mineralogy, etc.

Section 2—Palaeontology and Stratigraphy.

Section 3—Glacial Geology and Physiography.

**Wednesday, August 6th.**

8.00 p.m. Reunion and informal reception by the Toronto Local Committee. Costume de voyage. Convocation Hall, University of Toronto.

**Thursday, August 7th.**

10.00 a.m. Meeting of Council for organization and appointment of Bureau.

12.00 noon Opening General Meeting, Convocation Hall.

(a) The chair will be taken by the President of the Congress.

(b) Address of welcome on behalf of the Dominion of Canada to the members and formal opening of Twelfth Session.

(c) The President will submit the Bureau as nominated by the Council.

(d) The President elected in the new Bureau will take the chair.

(e) Addresses of welcome will be given by the President of the University of Toronto and by the Mayor of the City.

(f) The General Secretary will announce the arrangements for the Session.

3.00 p.m. General Meeting—Reports of International Committees of the Congress.

8.00 p.m. Popular lecture in Convocation Hall, University of Toronto.

**Friday, August 8th.**

- 9.00 a.m. Meeting of Council.  
10.00 a.m. General Meeting:—Topic No. 1.  
2.30 p.m. Section 1:—Topic No. 2.  
Section 2:—Topic No. 6.  
1.15 p.m. Ladies' Luncheon.  
All day. Excursion B-3, Hamilton.

**Saturday, August 9th.**

- 9.00 a.m. Meeting of Council.  
10.00 a.m. General Meeting:—Topic No. 7.  
2.30-4 p.m. Section 1:—Topic No. 3.  
Section 2:—Topic No. 7 continued.  
4.30 p.m.—A Garden Party will be given to the members of  
the Congress by Mr. and Mrs. D. A. Dunlap.  
All day. Excursion B-5, Moraines north of Toronto.  
Evening. Excursions B-6, Muskoka, and B-10, Madoc, leave.

**Monday, August 11th.**

- 9.00 a.m. Meeting of Council.  
10.00 a.m. General Meeting:—Proposals and continuations of  
Reports of International Committees.  
2.30 p.m. Section 1:—Topic No. 5.  
Section 2:—Miscellaneous.  
Section 3:—Miscellaneous.  
Evening. Reception by His Worship the Mayor and Alder-  
men of the City of Toronto at the City Hall.

**Tuesday, August 12th.**

Excursions only.

- All day. Excursion B-1, Niagara.  
Excursion B-2, Don and Scarboro.  
Excursion B-4, Credit River.

On application being made by ten or more members, ex-  
cursions will be arranged to any accessible point and leaders  
provided.

**Wednesday, August 13th.**

- 9.00 a.m. Meeting of Council.
- 10.00 a.m. General Meeting:—Topic No. 3.
- 2.30 p.m. General Meeting:—Topic No. 4.
- All day. Excursion B-7, Streetsville.  
Excursion B-9, Orillia.
- Afternoon. Excursion B-8, Clay Deposits.
- Evening. Banquet.

**Thursday, August 14th.**

- 9.00 a.m. Meeting of Council.
- 10.00 a.m. General Meeting:—Miscellaneous Business, and close of the Twelfth Session.
- 3.00 p.m. Special Convocation of the University of Toronto at which honorary degrees will be conferred.
- 4.15 p.m. Garden Party.
- Evening. Excursions C-1 and C-2 leave.

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### **Topics for Discussion.**

**Topic No. 1.—Coal Resources of the World.**

There are no separate papers, but the discussion on this subject will be based on the Monograph which has been in preparation for the last two and a half years under the direction of the Executive Committee of the Twelfth Session in Canada. Information has been supplied by Government Officials, Geological Surveys, Mining Bureaus and geological and mining engineers throughout the world. It has been edited by the members of the staff of the Geological Survey of Canada. The Monograph will be published in three volumes and one atlas, and the price for the set will be \$25.00 net. The publishers are Messrs. Morang & Company, Limited, Toronto, Canada. The members of the Twelfth Session have the privilege of buying one set at the price of \$20.00 net, provided their order reaches the publishers or the Secretary of the Congress on or before August 15th of this year, 1913.

**Topic No. 2.—Differentiation in Igneous Magmas.**

Messrs. F. Becke, Austria; R. A. Daly, U.S.A.; A. Harker, England; W. H. Hobbs, U.S.A.; J. P. Iddings, U.S.A.; F. J. Leewinson-Lessing, Russia; D. Platania, Italy; H. S. Washington, U.S.A.; and others have promised to take part in the discussion or to present papers.

**Topic No. 3.—The Influence of Depth on the Character of Metalliferous Deposits.**

Messrs. W. H. Emmons, U.S.A.; L. L. Fermor, India; J. F. Kemp, U.S.A.; P. Krusch, Germany; Louis de Launay, France; W. Lindgren, U.S.A.; Malcolm MacLaren, England; and others have promised to take part in this discussion or to present papers.

**Topic No. 4.—The Origin and Extant of the Pre-Cambrian Sedimentaries.**

Messrs. H. Bäckström, Sweden; J. Horne, Scotland; C. K. Leith, U.S.A.; J. J. Sederholm, Finland; and others have promised to take part in the discussion or to present papers.

**Topic No. 5.—The Sub-divisions, Correlation and Terminology of the Pre-Cambrian.**

Sir T. H. Holland, England; Messrs. A. C. Lawson, U.S.A.; T. Ogawa, Japan; J. J. Sederholm, Finland; A. Strahan, England; and others have promised to take part in the discussion or to present papers.

**Topic No. 6.—To what extent was the Ice Age broken by Interglacial Periods?**

Messrs. T. W. E. David, Australia; H. L. Fairchild, U.S.A.; G. W. Lamplugh, England; W. Lozinski, Austria; A. Penck, Germany; F. B. Taylor, U.S.A.; Warren Upham, U.S.A.; W. Wolff, Germany; and others have promised to take part in the discussion or to present papers.

**Topic No. 7.—The Physical and Faunal Characteristics of the Palaeozoic Seas, with Reference to the Value of the Recurrence of Seas in Establishing Geological Systems.**

Messrs. Chas. Barrois, France; T. C. Chamberlin, U.S.A.; Chas. Schuchert, U.S.A.; E. O. Ulrich, U.S.A.; C. D. Walcott, U.S.A.; and others have promised to take part in the discussion or to present papers.

### Miscellaneous.

In addition to papers on the topics mentioned, contributions on other subjects of interest have been received from:—

Messrs. L. E. Gentil, France; C. N. Gould, U.S.A.; C. R. Keyes, U.S.A.; J. Samojloff, Russia; Bailey Willis, U.S.A.; and others.

### Proposals.

#### The Phosphate Resources of the World.

A proposal has been received from Prof. J. Samojloff, of Moscow, Russia, suggesting the world's phosphate resources as a timely subject for the consideration of the Thirteenth International Geological Congress.

#### The Fractures of the Earth's Crust.

Regarding the proposal made at the Eleventh Session of the International Geological Congress by William H. Hobbs, and which was referred to the Executive Committee of the Twelfth Session, the Executive Committee will report to the Council of the Congress as follows:—

“The Executive Committee regret that, owing to the demands made upon their time in connection with the preparation of the extended series of excursions arranged for the Twelfth International Geological Congress, as well as in the publication of the Monograph on the Coal Resources of the World, they have been unable to undertake the preparation of an additional Monograph dealing with the fractures of the Earth's Crust as suggested by the Eleventh Session of the International Geological Congress. The Committee would, therefore, respectfully request that this task be transmitted to the Executive Committee of the Thirteenth International Geological Congress.”

### Reports of Committees.

Reports will be presented at the Twelfth Session of the International Geological Congress from the following Committees:—

#### 1.—International Glacier Committee.

Elected in 1894 to encourage and advance studies of the size and variations of glaciers.

**2.—Committee of the International Geological Map of Europa.**

This committee since the Congress at Stockholm, has decided to publish a map of the world on a convenient scale, and to add to the number of the Committee by inviting representatives from non-European countries.

**3.—Palaeontologia Univarialia Committee.**

An International Committee formed in 1900 to study the proposition of Mr. Oeblert regarding the reproduction by photographic processes of a series of type fossils.

**4.—Spandiarow Priza Committee.**

Charged with the award at each Session of the interest from a sum of 4000 roubles donated in 1897 by Mr. Spendiarow of Russia, for the most important geological work on a subject proposed by the Committee, that has been accomplished by an individual subsequent to the last Session.

**5.—Stratigraphical Lexicon Committee.**

Elected to carry out the proposal of Mr. Waagen regarding the publication of a stratigraphical lexicon.

**6.—Committee on Valuation of Iron Ore Resources.**

To carry out and complete, according to a uniform method, the valuation of the world's iron ore resources, principally from an economic point of view.

**7.—Committee on Institute for Study of Volcanoes.**

Elected to consider the proposal of Mr. E. Friedlander, regarding the establishment of an Institute for the study of volcanoes.

**8.—Fossil Man Committee.**

Elected to examine the proposal of Mr. N. O. Holst regarding the election of a Committee for the study of fossil man and for presenting a programme at the next Congress.

